API Spec Q1 Documentation Kit – American Petroleum Institute

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Quality Manual - API Spec Q1, 10th Edition

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5 Product Realization

5.1 Contract Review

5.1.1 General

Organization Name has a documented procedure for Contract Review to assess the requirements related to the provision of products and services. Before committing to the products/services, the responsible department ensures the following:

- The ability to meet the requirements, including those for delivery and post-delivery activities.
- Compliance with any applicable statutory and regulatory requirements for the product/service.
- Consideration of any additional requirements not specified by the customer.
- Definition of acceptance criteria for the products.
- Identification of any differences from previously stated order requirements.

5.1.2 Determination of Requirements

Organization Name identifies the following:

- Requirements specified by the customer;
- Legal and other applicable requirements; and
- Requirements not explicitly stated by the customer but deemed necessary by Organization Name for the provision of the product.

5.1.3 Review of Requirements

Organization Name conducts a review of the requirements related to the provision of products before committing to deliver the product to the customer. This review ensures that:

- Requirements are clearly identified and documented;
- Any discrepancies with previously identified requirements are addressed; and
- Organization Name has the capability to fulfill the documented requirements.

5.2 Planning

Operational planning is carried out by the individual departments of Organization Name to ensure customer requirements are met. The planning includes:

- Requirements for the products/services to be provided;
- Processes, documentation/information, and resources needed for the products and services;
- Verification, inspection, and measurement activities, as applicable;
- Acceptance criteria for the products.

Product Realization Planning

Product realization planning includes, as applicable:

- Definition and evaluation of manufacturing operations and processes;
- Development of effective and capable processes;
- Identification of special processes;
- Consideration of associated risks and consequences;
- Establishment and implementation of appropriate process control measures;
- Development of instructions and training for process operators;
- Identification of record requirements necessary to demonstrate process conformity.
- Product realization plans are developed through collaboration between Marketing, Production, Engineering, and Quality Assurance. These plans are outlined in various production documents, such as production work orders and operator instructions.
- QMS procedures related to the control of production and operations detail how the outputs of product realization planning are used.

Product Verification and Validation Planning

Product verification and validation planning defines the inspection and testing program for both the product and materials used in its production. This includes:

- Identification of inspection and testing points;
- Scope, frequency, and methods of inspection and testing;
- Acceptance criteria; and
- Record requirements necessary to demonstrate product conformity.

Contract Review Procedure

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1 Purpose

The purpose of this procedure is to establish a framework for the evaluation and approval of contracts at Organization Name, ensuring compliance with API Spec Q1, 10th edition quality management system requirements. This procedure aims to minimize risks associated with contractual obligations while promoting adherence to quality standards that align with the company's strategic objectives and operational integrity.

The objective of this procedure includes:

- Receiving, reviewing, and processing business inquiries and customer contracts/orders.
- Ensuring compliance with legal and other applicable requirements.
- Addressing requirements not specified by the customer but deemed essential by Organization Name for delivering the product.

2 Scope

This procedure applies to all contracts and agreements executed by Organization Name, including contracts with customers, suppliers, subcontractors, and service providers. It includes all relevant departments involved in contract management, such as sales, procurement, legal, finance, and quality assurance, to facilitate an integrated approach to contract evaluation.

This procedure applies to the following systems and standards:

- API Spec Q1, 10th Edition
- ISO 29001:2020

3 Responsibility

3.1 **Quality Manager (Chair of the Contract Review Committee):** Oversees the contract review process and ensures compliance with quality management requirements.

3.2 **Procurement Officer:** Assesses terms related to procurement, pricing, and supplier obligations.

3.3 **Project Manager:** Provides insights on operational feasibility, deliverables, and timelines associated with the contract.

3.4 **Finance Representative:** Evaluates financial implications, budget alignment, and cost structures related to the contract.

3.5 **Business Development Manager**: Assesses potential contracts for alignment with business objectives, engages with clients to clarify requirements, and collaborates with internal teams to identify risks.

3.6 **Commercial Officer**: Evaluates contract terms, assesses risks, ensures compliance, and supports negotiations to optimize business agreements and outcomes.

4 Description of Activity

4.1 Customer Enquiry

4.1.1 All customer inquiries to Organization Name are logged in the Enquiry Register within the Commercial Department. Upon receipt, inquiries are categorized as follows:

- **Enquiry Job (EJ):** Inquiry for machine shop services/work
- **Enquiry Contracts (EC):** Inquiry for contracts
- **Enquiry Supply (ES):** Inquiry for product sales

4.1.2 Each inquiry is assigned a unique number that identifies its type, the year, and a serial number (e.g., EJ/24/007, where EJ indicates the type of inquiry, 24 represents the year 2024, and 007 is the serial number in that category).

4.1.3 After assigning the inquiry number, the Commercial Officer or their designee records the inquiry's description, client information, contact person, and closing date in the logbook. They also complete the inquiry form with the necessary information and create an inquiry file.

4.1.4 Depending on the inquiry type, the Commercial Officer forwards it to the relevant personnel for estimation. If the inquiry is complex, the responsible estimator or the Commercial Officer may call for an inquiry review meeting to address the following:

- Is the inquiry within Organization Name's scope?
- Does Organization Name have sufficient resources to manage the order/contract?
- Is Organization Name's infrastructure suitable for carrying out the job?

- Is the time allowed by the client sufficient, and can any extensions be requested?
- Is there a need for specialists, vendors, or subcontractors, and are they available?
- Is a bid bond required?
- Who is responsible for estimation?
- Will there be a pre-tender meeting or site visit, and who will attend?

4.1.5 For verbal inquiries, the receiving personnel fill out a verbal inquiry form and forward it to the Commercial Department for further action.

4.1.6 The Commercial Officer is responsible for submitting the inquiry details to the Planning and Estimation Department. Based on this information, a bid calculation is prepared, and a quotation is generated, reviewed, and sent to the client.

4.2 Quotation Follow-Up

4.2.1 Once quotations are submitted to customers, the sales team consistently follows up on them. The personnel who received the initial inquiry, along with the responsible manager or Commercial Officer, are involved in this process. The Commercial Officer coordinates with the team and may reach out to the customer directly if needed.

4.2.2 The Commercial Officer is kept informed about the status of the quotation and can also contact the client directly. For all lost tenders or bids, the inquiry file is closed, and relevant documents may be sent to the lost tender/order records or retained by the estimation engineer or the responsible manager for reference purposes.

4.3 Contract Review

4.3.1 Upon receiving a customer order, it is recorded in the Job Register with an internal order number assigned based on the type of order:

- JO – Machine shop services/job order/Contract Order
- SO – Product Sale Order/Supply Order

4.3.2 The Job Register includes the following information:

- Enquiry No (XXX)

- Order No (XXX)
- Customer Name
- Description of Order
- Order Value
- Customer PO Reference
- Commencement Date
- Completion Date

4.3.3 Upon receiving a customer order, both the order and the quotation are reviewed simultaneously. Any discrepancies between the customer order and the original quotation are resolved directly with the customer.

4.3.4 The Commercial Officer, in collaboration with the relevant manager, is responsible for reviewing the requirements of both the quotation and the order in accordance with this procedure. The Contract Review Form (XXX/COM/01) serves as the document for contract reviews, ensuring that all requirements, including legal and other obligations, are addressed. The Contract Review Checklist is verified with each process owner for feasibility, and the review minutes are recorded for submission to the Chairman.

4.3.5 In the case of a verbal order, the relevant manager is responsible for documenting the customer requirements to avoid any ambiguities later on.

4.4 Invoicing

4.4.1 Timely and accurate invoicing is essential for Organization Name's operations to maintain a planned cash flow. In this regard, the Machine Shop Manager and the Operations Engineer responsible for the contract/order initiate the invoice request and forward it to the Commercial Department.

4.4.2 The Commercial Officer verifies the request against the contract specifications and updates the records in the contract/order file. After completing the review and updating the records, the request is sent to the Machine Shop Manager for review and signature before being forwarded to the Finance Department.

Analysis of Data Procedure

Contents

DOCUMENT NO:	
REVISION NO:	
DATE OF REVISION:	
PREPARED BY:	
REVIEWED BY:	
APPROVED BY:	
SIGNATURE:	

1 Purpose

The purpose of this procedure is to establish a system for identifying, collecting, and analysing data to demonstrate the suitability and effectiveness of the quality management system. At Organization Name, data analysis includes information generated from monitoring and measurement, internal audits, management reviews, and other relevant sources. This procedure aims to enhance decision-making processes, support continuous improvement initiatives, and effectively monitor performance metrics that contribute to the overall quality and operational excellence of the organization.

2 Scope

This procedure applies to all data generated and used within Organization Name, including but not limited to operational performance data, customer satisfaction surveys, quality control records, and financial performance metrics. It encompasses all departments involved in data management, including operations, quality assurance, customer service, and finance, promoting an integrated approach to data analysis across the organization.

3 Responsibility

3.1 **Management Representative:** Responsible for ensuring that the data analysis processes align with the strategic goals of Organization Name and comply with API Spec Q1 requirements. The Management Representative will also allocate necessary resources for effective data analysis and reporting.

3.2 **Quality Manager:** Oversees the implementation of the analysis of data procedure, ensuring the integrity of data collection and analysis processes. The Quality Manager will lead the interpretation of analysis results and facilitate discussions aimed at driving continuous improvement.

3.3 **All Concerned Process Heads:** Each process head is responsible for collecting, validating, and providing data relevant to their area of operation. They will also collaborate with the Quality Manager to analyse data, interpret results, and contribute to action planning based on findings.

4 Description of Activity

4.1 Analysis of Data

4.1.1 The Management Representative reviews collected data, such as customer complaints, and identifies the statistical techniques necessary for establishing, controlling, and verifying process capability and product characteristics. Once a suitable technique is identified, it is implemented in the relevant area.

4.1.2 Data analysis provides insights related to:

- Customer satisfaction
- Customer complaints
- Self-assessments
- Audit results
- Conformity to product requirements
- Nonconformities and product failures identified post-delivery or use, provided that the product or documented evidence is available for determining the cause
- Characteristics and trends of processes and products, including opportunities for preventive action
- Supplier performance
- Information on quality objectives

4.1.3 Corrective actions are taken to ensure their effectiveness, and records of data analysis are maintained.

4.1.4 The data is analysed periodically at least once every three months, and a statistical report is prepared and submitted to top management for their information and necessary follow-up on corrective actions and continual system improvement. A summary of the statistical analysis is presented during the Management Review Meeting.

4.2 Customer Feedback

Customer satisfaction is outlined in the procedure for Customer Satisfaction.

4.3 Customer Complaint

4.3.1 All customer complaints received at Organization Name are recorded in the Customer Complaint Record.

4.3.2 It is the responsibility of all managers and staff to report any customer complaints to the Quality Manager and Management Representative by forwarding any written complaints received from clients. For verbal complaints, the relevant personnel must either document the complaint in the Customer Complaint Record or send a written note to the Management Representative.

4.3.3 Customer complaints are used as a tool to verify customer satisfaction. All complaints logged in the Customer Complaint Record are subject to verification by the Management Representative, and a periodic review of these complaints is conducted.

4.3.4 Every employee at Organization Name is responsible for informing management of any customer complaints reported, whether verbally or in writing.

4.3.5 Each customer complaint is treated as nonconformity, and necessary corrective and preventive actions are implemented accordingly.

4.3.6 The number and frequency of customer complaints are monitored weekly, and trends in nonconformities are reviewed regularly.

4.3.7 The Management Representative compiles this information, including the status of corrective and preventive actions, for the Management Review.

4.4 Verification of Conformity to Product Requirement

4.4.1 Organization Name understands that product conformance is achieved by using the right personnel for the appropriate tasks, employing suitable materials, machinery, and tools, and having a clear understanding of customer requirements. All personnel involved in manufacturing products or providing services are trained to effectively fulfill their roles in accordance with these requirements.

4.4.2 This training is monitored throughout various stages of the manufacturing process or service delivery by supervisors and inspection personnel.

SOP for Radial and Pillar Drill Operator

Contents

DOCUMENT NO:	
REVISION NO:	
DATE OF REVISION:	
PREPARED BY:	
REVIEWED BY:	
APPROVED BY:	
SIGNATURE:	

SOP for Radial and Pillar Drill Operator

1 Purpose

The purpose of this procedure is to provide clear guidelines for the safe, efficient, and accurate operation of radial and pillar drills at Organization Name. This procedure ensures that drilling operations are conducted in compliance with API Specification Q1, 10th Edition, with an emphasis on maintaining product quality, safety, and adherence to established quality management system (QMS) requirements.

2 Scope

This SOP applies to all operators of radial and pillar drills at Organization Name involved in drilling operations for manufacturing, fabrication, and finishing. It covers all aspects of the drilling process, including machine setup, operation, maintenance, safety protocols, and quality control measures. It ensures compliance with the API Spec Q1, 10th Edition QMS requirements, which focus on process consistency, quality assurance, and product traceability.

3 Responsibility

3.1 **Radial and Pillar Drill Operator** is responsible for operate drills according to SOP, ensuring safety and compliance with API Spec Q1, 10th Edition. Maintain operation records, report issues, and follow safety guidelines, including PPE use.

3.2 **Supervisors/Managers** is responsible for ensure operator training, oversee drilling operations for safety and quality, conduct audits, and approve SOP or equipment modifications that impact drilling processes.

3.3 **Maintenance Team** is responsible for perform routine and preventive maintenance on drills, ensuring optimal function and timely issue resolution. Maintain records of maintenance and repairs as part of the QMS.

3.4 **Quality Control (QC) Department** is responsible for monitor drilled component quality, ensuring adherence to tolerances, specifications, and standards. Inspect parts for conformity and address non-conformances with corrective actions.

4 Description of Activity

4.1 Preparation

4.1.1 Machine Inspection

Ensure the radial or pillar drill is properly set up before use. Inspect the machine for wear, damage, or malfunction, paying particular attention to the condition of the chuck, drill bit, feed mechanism, and motor.

Verify that safety features, such as emergency stops, safety shields, and protective covers, are in place and operational.

4.1.2 Tool Selection

Select the appropriate drill bit or tool for the material to be drilled, ensuring it meets the technical requirements of the project.

Inspect drill bits for wear or damage before installation. Use the correct size and type for the operation.

4.1.3 Calibration

Ensure the machine is calibrated to the correct depth, feed rate, and speed according to the technical drawing or work order specifications.

Confirm that the workpiece is securely clamped in place to prevent any movement during drilling.

4.2 Operation

4.2.1 Starting the Machine

Turn on the machine following the manufacturer's guidelines and ensure it reaches the required speed before starting the drilling process.

Ensure the workpiece is aligned correctly with the drill and that all safety features are functioning properly.

4.2.2 Drilling Process

Begin drilling at a steady and controlled feed rate. Avoid overloading the machine or applying excessive pressure to the drill.

Continuously monitor the drill to ensure the correct hole depth, diameter, and finish are being achieved.

Make necessary adjustments to the feed rate, speed, and depth during the operation if required to meet specifications.

4.2.3 Safety Protocols

Always operate the drill with the proper PPE, including safety glasses, gloves, hearing protection, and any other required safety gear.

Never leave the machine running unattended. If any abnormal conditions are detected (e.g., excessive vibrations, noise, or smoke), stop the machine immediately and investigate the issue.

4.3 Post-Operation

4.3.1 Cleaning and Maintenance

After each drilling operation, clean the machine to remove metal shavings, debris, or any residual coolant or lubricant.

Inspect the machine for any signs of wear or damage, and report any issues to the maintenance team.

Ensure that the work area is tidy and free of any hazards that could cause accidents or interfere with subsequent operations.

4.3.2 Records

Complete all required documentation, including machine settings (speed, feed rate, etc.), material type, and part numbers.

SUPPLIER REGISTRATION FORM			
Date of registration	January 01 , 2020		
Provider name	XYZ Components Ltd		
Provider address	123 Industrial Park		
	Tech City, CA 98765		
	USA		
Contact person and designation	John Doe, Purchasing Manager		
Contact details	+1 (555) 555-5555, john.doe@companywebsite.com		
Company website	www.companywebsite.com		
Type of provider	Manufacturer		
Employee strength	500+		
No. of site / branch	5		
Scope of supply	Precision electronic components including resistors, capacitors, and integrated circuits.		
Are you certified company?	☑ Yes	☐ No	
ISO certifications	ISO 9001:2015 and ISO 14001:2015		
Other certifications	CE Marked and UL Listed		
Sister concerns, If any	ZYX Components Ltd		
Reference name and contact no.	Paul Adam, Head of Purchase		
Approval criteria	A – Grade. Quality and delivery performance history		
Evaluation criteria	- Quality performance review: Semi-Annually - Delivery performance review: Quarterly		
Test certificates provided	Yes, all components come with a Certificate of Compliance verifying that they meet the specified standards.		
Delivery time	- Initial orders: 4 weeks from order placement - Subsequent orders: 2 weeks from order placement		
Legal compliance	Compliance with local, national, and international regulations, including environmental and safety standards.		
Are you associated with our firm? If so, for how long?	☐ Yes	☐ No	5 years

Do you have any objections to our representative or client visiting your facility for product inspection, auditing, and record review? If so, please detail your objections below:	☐ Yes	☐ No
Authorized person details		
Name		
Designation		
Signature		

To be filled by company					
○	Recommended as approved supplier	○	Not recommended as approved supplier		
Reason for approval					
☐	Past experience	☐	Capability assessment	☐	Sample approval
☐	Client preferred	☐	Trial order	☐	Market reputation
☐	Quality manufacturer	☐	Govt. approved	☐	Recognized company
Reason for rejection					
☐	Quality issues	☐	Delivery performance	☐	Compliance
☐	Service and support	☐	Contractual issues	☐	Ethical concerns
Approved person details					
Name					
Designation					
Signature					

INTERNAL AUDIT NON–CONFORMITY REPORT			
NC report no		Date	
Department / area		Document reference	
Auditor		Clause no	
Audit criteria		Control #	
Description of nonconformity			
In-charge with action date			
Responsible person		Planned date	
Actual date		Completion date	
Audit information			
Auditee name		Auditor name	
Root cause of nonconformity			
Action taken to resolve the non–conformities			
Corrective action taken			
Review of action taken			
Status	☐ Closed	☐ Open	Date
Review of the effectiveness of action taken (next audit)			
Effectiveness checked by		Date	